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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,820	09/26/2001	David G. Leeper	42390P10398	2634

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EXAMINER	
VARTANIAN, HARRY	
ART UNIT	**PAPER NUMBER**
2634	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/964,820	LEEPER, DAVID G.	
	Examiner	Art Unit	
	Harry Vartanian	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14-21 and 23-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14-21 and 23-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/2003, 12/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. In view of the Appeal Brief filed on 10/25/2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1-3, 5-12, and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Trompower et al(US Patent 6,088,591). Regarding Claim 1, Trompower et al states two examples meeting the limitation of the claim:

> "Upon registering with a particular base station 154, 156, ***the wireless base station 156 transmits a request to the base station 154, 156*** with which it is registered ***prompting it to send*** the contents of ***its roaming table 296***. ***The base station*** 154, 156 with which the wireless base station 156 has just registered in turn ***transmits the contents of its roaming table 296 to the wireless base station 156 such that the contents of the roaming table 296 in each of the base stations 154, 156 are substantially identical.*** However, as described below in the context of when a base station 154, 156 transmits information for forming a reduced roaming table 320 to a mobile terminal 166, the contents of ***the roaming table as transmitted are updated to reflect the hopping sequence timing information for the various base stations at the time the information is transmitted.*** The wireless base station 156 then broadcasts its own new base station registration packet to all of the other base stations 154, 156 in the system 150. The new base station registration packet has the same format at those sent by the base stations 154 as discussed above in connection with FIG. 12, step 418. The

> other base stations 154, 156 then use the information in the new base station registration packet to create an entry in their respective roaming tables 296 corresponding to the newly introduced wireless base station 156."**(Column 21, Lines 37-60; please also read Column 21, Lines 7-36 omitted for brevity.)**
>
> "Referring now to FIG. 12, the procedure according to which each base station 154 may enter the system 150 is shown... After powering up and upon completing any self-initialization routines, ***the processor 176 is programmed to generate and broadcast an "entry" packet to any base stations 154, 156 in the system 150 as represented in step 402.*** Such entry packet is received by each base station 154 directly via the system backbone 152, and ***each wireless base station 156 receives such broadcast packet*** via the base station 154 with which it is associated...The data field 254 includes information identifying the base station 154 as having entered the system 150 ***and requesting that other base stations 154, 156 in the system 150 reply with an entry response packet 280 in the format shown in FIG. 9."*** **(Column 19, Lines 15-38)**

The key point in the above paragraphs is that the wireless basestation(a type of master device) requests or prompting it to send the roaming table of basestation 154 which contains frequency hopping sequences(see fig 12 for table format and content). In the broadest sense, one definition of polling on dictionary.com is:

2. *To receive or record the votes of:* polling a jury.
3. *To cast (a vote or ballot).*
4. *To question in a survey; canvass.*
7. *To register or deposit, as a vote*

Therefor the act of requesting or registering can be considered as polling. Furthermore, Trompower states that the motivation for request the frequency hopping table sequence is to "...**search for a new base station** which ***provides even better performance*** in the same manner described below with respect to the mobile terminals 166 and a priority fast scan."(Column 21, Lines 61-66)

Regarding Claim 18, mobile stations do indeed send hopping sequences to basestations. However, the explanation given in paragraphs 1 and 2 also applies to this Claim. More specifically, a hopping sequence is information that is contained in the roaming table of a basestation. In paragraphs 1 and 2, it was established that Trompower et al does in fact disclose polling and exchange of roaming tables between basestation's during

handoff or new registration. This would include sending hopping sequences so that transmission is not interrupted between mobile stations and base stations during handoff.

Regarding Claim 5 Trompower et al discloses a method and system where base stations exchange hopping sequences information using a backbone connection(Abstract).

Regarding Claims 2, 3, 19-20, Trompower et al discloses the use of a wired twisted pair network or wireless means to exchange hopping sequences(Column 8, Line 37-40).

Regarding Claims 6 and 7, Trompower et al discloses the method of handing over a mobile terminal from one base station to another(Column 9, Lines 47-51) after hopping sequences have been exchanged(Column 21, Lines 37-60; please also read Column 21, Lines 7-36 omitted for brevity).

Regarding Claims 8 and 9 Trompower et al describes the method of handing off a mobile terminal once the signal strength falls below a threshold value(Column 31, Lines 44-48 and Column 29, Lines 5-46).

Regarding Claim 10, Trompower et al describes the updating of roaming tables of mobile stations, which in turn later update other base stations and terminals after handoff(Column 24 lines 21-43). Therefore "neighboring" base station tables are updated using this method.

Regarding Claims 11 and 21, Trompower et al describes the mobile devices in his system being able to send beacon packets to base stations with updated hopping sequences when moving to a new cell. More specially, "As is explained below in connection with FIGS. 15A-15B, a mobile terminal 166 which newly registers with a base station 154, 156 transmits a mobile terminal update packet to the new base station 154, 156 which includes current hopping sequence timing information and test pattern information for the base

station 154,156 with which the mobile terminal 166 was previously registered." (Column 24, Lines 44-54) Since base stations also send there information to each other through the backbone as disclosed above, it can be inferred that the mobile stations, or "slaves", are in fact adjusting their hopping sequences to base stations, or "masters", in other cells.

Regarding Claim 12, Trompower et al describes the switching of hopping sequences of the mobile terminal during handoff(Column 2, Lines 31-37).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 4, 14-17, 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trompower et al(US Patent 6,088,591) in view of Dehner et al(US 2003/0035464). Regarding Claims 4 and 14 Trompower et al meets all the limitations of the claims(see above paragraphs) except disclosing that polling and determining that the first master is still receiving a signal from the slave occur ***concurrently***.

However, Dehner et al discloses a handoff method where a network access point(NAP), i.e. second master, running on a first frequency hopping sequence(FHP) communicates with other NAPS, or other masters, when the signal quality of a communication unit(CU), i.e. slave, drops below a threshold value(See Abstract and fig 7). Moreover, the first NAP will send requests, i.e. polling, to the other NAPS requesting assistance(Fig 7, item 707). The other NAPS in return send a reply stating that a connection can be provided on a second FHP(Abstract). Therefor the result of polling a first master by a second master is receiving the FHP of the first master ***after*** it is determined that the signal quality of the slave is diminishing. Therefor it would have been prima facie obvious at the time the invention was made to combine Trompower et al with Dehner et al. A motivation to combine is disclosed by Dehner et al wherein he states that communication between master devices is needed since a fading slave can loss a connection when it falls between the coverage areas of two masters(Paragraphs 0016-0020).

Regarding Claim 23, Dehner et al disclose that their handoff method described above is best implemented in stored software using instructions(Para 0014, 0034).

Regarding Claim 15 and 24, Trompower et al describes the use of sending beacon packets to exchange hopping sequences(Column 2, Line 58 to Column 3, Line 33).

Regarding Claims 16, Trompower et al discloses the use of a wired twisted pair network or wireless means to exchange hopping sequences(Column 8, Line 37-40).

Regarding Claim 17, Trompower et al describes the updating of roaming tables of mobile stations, which in turn later update other base stations and terminals after handoff(Column

24 lines 21-43). Therefore "neighboring" base station tables are updated using this method.

Regarding Claims 25, Trompower et al describes the method of handing off a mobile terminal once the signal strength falls below a threshold value(Column 31, Lines 44-48 and Column 29, Lines 5-46).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Vartanian whose telephone number is 571.272.3048. The examiner can normally be reached on 10:00-6:30 Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571.272.3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harry Vartanian
Examiner
Art Unit 2634

HV

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